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09/743,524	01/05/2001	Hans-Josef Giertz	21714	4033

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THE FIRM OF KARL F ROSS  
5676 RIVERDALE AVENUE  
PO BOX 900  
RIVERDALE (BRONX), NY 10471-0900

EXAMINER

WACHTEL, ALEXIS A

ART UNIT PAPER NUMBER

1764

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/743,524

Applicant(s)

GIERTZ ET AL.

Examiner

Alexis Wachtel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,6,8,9,12,13,14,16 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 1,3,4,7,10,11,14,17,18,20 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1-5-2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Detailed Action***

***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of claims 15 and 20 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Specification***

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: in particular, with respects to claim 20, the specification fails to describe what "support corrugations" are. With respects to claim 3, the specification does lacks antecedent basis enabling for the use of entrainers whose heights extend above the height of the cheeks.

***Claim Objections***

3. Claims 1,3,4,10,11,14,18,20 are objected to because of the following informalities: Claim 1 recites the limitation vertically arranged cheeks, like sheet metal plates. Is Applicant claiming sheet metal plates? Claim 3 recites the limitation "all partial webs surfaces". Claim 10 recites the limitation "the support and guide rollers". Claim 11 recites the limitation "the support and guide rollers". Claim 13 recites the limitation "the

openings ribs", and the "openings". Claim 14 recites the limitation "the ribs". Claim 18 recites the limitation "the fluid conduits". Claim 20 recites the limitation "sealing and guide boxes". These limitations lack antecedent basis. Appropriate correction is required. Additionally, with respects to claim 20, the specification fails to describe what "support corrugations" are. With respects to claim 4, Applicant fails to describe what is meant by the phrase "the spacing of the coal entrainers". Is Applicant referring to the distance between individual entrainers? With respects to claim 3, what does Applicant mean by the phrase "The levelling bar...characterized in that the number of coal entrainers is at least so great that the sum of all partial web surfaces corresponds to the sum of all full web surfaces of coal entrainers whose heights extend above the height of the cheeks." The specification does lacks antecedent basis enabling for the use of entrainers whose heights extend above the height of the cheeks.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1,8,9,16,19,20,21 rejected under 35 U.S.C. 102(b) as being anticipated by US 4,181,578 to Stauffer et al.

Per claim 1: A leveling bar (Fig.3) for a coking oven for spreading the coal pile cone formed during the filling process under the filling openings of the oven chamber, comprised of two substantially vertically arranged cheeks (29,31), like sheet metal

plates, parallel to one another spaced apart in dependence upon the width of the oven chamber and extending substantially the full length of the oven chamber, with coal entrainers (65) extending transversely and arranged one behind the other at a mutual spacing in the intervening space bounded by the cheeks, which extend only over a part of the cross sectional area of the leveling bar formed between the cheeks, characterized in that the heights of the coal entrainers over the entire distance between the cheeks is less than the height of the cheeks and the cheeks above the coal entrainers form a gas passage which is substantially baffle free.

Per claim 8: The leveling bar characterized in that the cross sections of the coal entrainers are wedge shaped or otherwise profiled (65).

Per claim 9: The leveling bar characterized in that the cheeks are wedge shaped or otherwise perforated (29,31).

Per claim 11. The leveling bar characterized in that the support and guide rollers are laterally shiftable by a shifting device (Col 2, lines 23-30). Examiner notes that since the pushing machine as disclosed by Stauffer et al travels on rails laterally to a plurality of coking ovens thus affording lateral shiftability in an indirect manner to support and guide rollers contained in the pushing machine.

Per claim 14, characterized in that ribs are arranged at an angle to the cheeks deviating from 0°. The Examiner notes that coal entrainers are ribs and are arranged at an angle to the cheeks deviating from 0°.

Per claim 16: The leveling bar characterized in that the cheeks (29,31) of the leveling bar have guide stirrups (97) at their front ends.

Per claim 19: The leveling bar characterized in that the leveling bar is sealed with one or more sealing and guide boxes (Col 2, lines 31-38).

Per claim 20: The leveling bar characterized in that the sealing and guide boxes (23) are provided with support corrugations (Col 2, lines 31-38). The Examiner interprets support corrugations as walls.

Per claim 21: The leveling bar characterized in that at least one sealing and guide box is provided with a housing (Col 2, lines 31-38).

6. Claims 1,6,12,13,16,19,20,21 rejected under 35 U.S.C. 102(b) as being anticipated by US 3,515,293 to Cain.

Per claim 1: A leveling bar (Fig.2, Fig.3) for a coking oven for spreading the coal pile cone formed during the filling process under the filling openings of the oven chamber, comprised of two substantially vertically arranged cheeks (58,56), like sheet metal plates, parallel to one another spaced apart in dependence upon the width of the oven chamber and extending substantially the full length of the oven chamber, with coal entrainers (60) extending transversely and arranged one behind the other at a mutual spacing in the intervening space bounded by the cheeks, which extend only over a part of the cross sectional area of the leveling bar formed between the cheeks, characterized in that the heights of the coal entrainers over the entire distance between the cheeks is less than the height of the cheeks and the cheeks above the coal entrainers form a gas passage (6) which is substantially baffle free.

Per claim 6: The leveling bar characterized in that the coal entrainers are affixed to the cheeks at an angle deviating from the vertical (60).

Per claim 12: The leveling bar characterized in that the cheeks have openings (62).

Per claim 13: The leveling bar characterized in that in the openings ribs are arranged or ribs laterally bound the openings (Fig.3) The Examiner interprets areas between plurality of openings (62) as ribs.

Per claim 16: The leveling bar characterized in that the cheeks of the leveling bar have guide stirrups at their front ends (64).

Per claim 19: The leveling bar characterized in that the leveling bar is sealed with one or more sealing and guide boxes (Col 2, lines 67-72; Col 3, lines 1-6).

Per claim 20: The leveling bar characterized in that the sealing and guide boxes are provided with support corrugations (Col 2, lines 67-72; Col 3, lines 1-6). The Examiner interprets support corrugations as walls.

Per claim 21: The leveling bar characterized in that at least one sealing and guide box is provided with a housing (Col 2, lines 67-72; Col 3, lines 1-6).

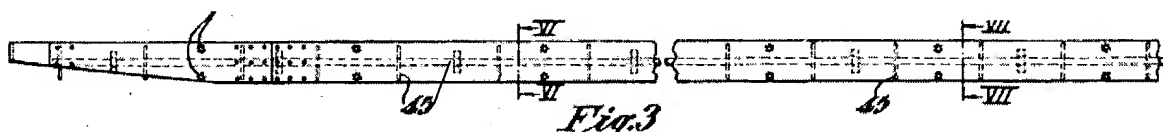
7. Claims 1,5,16 rejected under 35 U.S.C. 102(b) as being anticipated by US 1,720,805 to Van Ackeren et al.

Per claim 1: A leveling bar (Fig.2, Fig.3) for a coking oven for spreading the coal pile cone formed during the filling process under the filling openings of the oven chamber, comprised of two substantially vertically arranged cheeks, like sheet metal plates, parallel to one another spaced apart in dependence upon the width of the oven chamber and extending substantially the full length of the oven chamber, with coal entrainers (44,45) extending transversely and arranged one behind the other at a

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mutual spacing in the intervening space bounded by the cheeks, which extend only over a part of the cross sectional area of the leveling bar formed between the cheeks, characterized in that the heights of the coal entrainers (44,45) over the entire distance between the cheeks is less than the height of the cheeks and the cheeks above the coal entrainers form a gas passage which is substantially baffle free.

Per claim 5: The leveling bar characterized in that the coal entrainers have different heights as shown in Fig.3 below.



Per claim 16: The leveling bar characterized in that the cheeks of the leveling bar have guide stirrups at their front ends (27).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,181,578 to Stauffer et al.

With respects to claim 4, Stauffer et al as set forth above fails to teach that the spacing of the coal entrainers corresponds to the height of the coal entrainers. However, absent a showing of structural criticality, configuring the coal entrainers such



that individual coal entrainers are spaced apart from each by a distance equal to the height of said coal entrainers would have been a matter of simple and obvious design choice.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,181,578 to Stauffer et al in view of US 4,264,263 to Richmond, Jr.

Stauffer et al teaches that the leveling bar is carried by a pushing machine (27) mounted laterally on rails (28) for longitudinal movement along the coke oven battery. The pushing machine carries suitable apparatus for opening and closing the oven chuck door frame and leveling bar to prevent emissions (Col 2, lines 23-30). However, Stauffer et al is silent as to providing the leveling bar with support and guide rollers having a bevel. Richmond, Jr. teaches a leveler bar sealing mechanism that utilizes beveled guide rollers (Fig. 3, item 62) for guiding a leveler bar into a coking oven. Since Stauffer et al and Richmond, Jr. are both concerned with leveling bars and means of their operation, it would have been obvious to one of ordinary skill to have integrated beveled guide rollers as taught by Richmond, Jr. into the pushing machine disclosed by Stauffer et al for supporting the leveler bar. One of ordinary skill would have been motivated by the desire to provide an equivalently functioning, more cost effective or simpler means for guiding a leveler bar into a coking oven.

11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 1,720,805 to Van Ackeren et al.

With respects to claim 2, Van Ackeren et al as set forth above fails to teach that the height of the coal entrainers corresponds to at most half the height of the cheeks.

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However as evidenced by the Van Ackeren, employing coal entrainers of varying heights is enabled (Fig.3) and no criticality is associated with coal entrainer heights. The shorter coal entrainer height is around half the height of the cheeks per Fig.3 as shown above. Accordingly, having employed coal entrainers with a height of at most half the height of the cheeks would have been an obvious matter of design choice.

### ***Prior Art of Record***

12. The prior art of record and not relied upon is considered pertinent to Applicant's disclosure. In addition, the following references are cited for disclosing various aspects of Applicant's invention:

US 5,925,222; US 5,238,347; US 3,616,947; US 1,937,734; US 4,491,505;

US 4,555,209; US 5,176,489; US 4,486,139; US 2,234,827

### ***Allowable Subject Matter***

13. Claims 7,17,18 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Per claim 7. The leveling bar characterized in that the coal entrainers are movably fastened on the cheeks.

Per claim 17, no prior art has been found to teach or suggest that the cheeks of the leveling bar can have movable coal scrapers.

Per claim 18, No prior art has been found to teach or suggest that the fluid conduits with nozzles are arranged on the cheeks.

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Per claim 22, No prior art has been found to teach or suggest the coal entrainers have openings.

**Conclusion**

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex Wachtel whose telephone number is 571-272-1455. The examiner can normally be reached on 10:30am to 6:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Glenn Caldarola, can be reached at (571)-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Glenn Caldarola  
Supervisory Patent Examiner  
Technology Center 1700